

EXECUTIVE SUMMARY

Expanding Broadband in West Kentucky

On October 25, 2013 Murray State University (MSU) signed a memorandum of agreement (MOA) in partnership with the Commonwealth's Office of Broadband Outreach and Development (OBOD) and the Council on Postsecondary Education (CPE) to help administer a grant to increase broadband access and availability in the four most underserved areas in the MSU service region of the Jackson Purchase Area in far west Kentucky. Those four counties identified by the Purchase Area Development District were Fulton, Hickman, Carlisle, and Ballard. According to the 2012 US Census Bureau, these four counties combined represent a total population of 38,153 citizens. The median age of the four counties is 42.9 and the median income is \$45,490.00. The percent of the population with a high school diploma is 83.9%, but only 17% have a bachelor degree. The land mass is 957 square miles. Most of which is devoted to agriculture farm land and all four counties are bordered on the west side by the Mississippi River. The main jobs boosting the economy in the four counties are agriculture/forestry, education, government and marine transportation. When the grant was initiated by OBOD in spring of 2013, their mission was to accelerate the expansion of sustainable broadband access and adoption in the Commonwealth by determining the characteristics of broadband availability and use in Kentucky, and promoting the value of broadband to improve the lives of citizens. More specifically within the West Region Plan the goal was to increase adoption and availability of broadband for education and household/residential usage by creating eLearning Centers in the four most underserved counties in the region. The eLearning Centers would be developed in partnerships with local entities to provide after-hour access to high-speed Internet services and help eliminate service and cost barriers to education and economic development for all citizens in those counties. The grant supported the following three objectives to accomplish the mission and goals.

Objective 1: Build Local and Regional Leadership and Capacity

The first thing MSU did was to form an internal support team made up of the following staff:

Michael Ramage, Associate Director, Center for Telecommunication System Management

Gina Winchester, Executive Director of Regional Outreach

Jonathan Baskin, Coordinator for Regional Outreach

Together this group developed tactics to implement the West Region Broadband Outreach plan. The MSU support team met on a regular basis via conference calls with the staff from OBOD and CPE to develop the components, outcomes, and metrics for implementation of the West Region initiatives. Using the final recommendations of a Rural Access Work Group formed by CPE, the lead team looked at establishing "eLearning Centers" in the four counties. The centers developed through partnerships with schools, public libraries, local governments, adult education

centers, senior citizens centers, businesses, and nonprofits to provide after-hours access to high-speed Internet services and training on topics of interest to the community. The MSU support team then pulled together key leaders from each of the four counties with local governments, rural utilities, and telephone and internet providers to talk about developing an infrastructure to create and expand affordable broadband availability and help eliminate service and cost barriers. A group of fifty individuals identified by the MSU support team through visits to the region became the nucleus of local support. These community leaders also provided input into the most logical locations to establish eLearning Centers in each of their counties. A representative from the Purchase Area Development District was also included in the group discussions. After meeting a couple of times to educate the leaders on the issues and grant funding, a Regional Task Force made up of the four county judges and the four representatives of the MSU Regional Advisory Council was formed. This Regional Task Force met regularly with the MSU representatives throughout the grant process, with over 50 visits to the region, which was one of the main components to the grant success. Five orientation/training sessions were conducted with leaders in the region.

In addition, an individual was hired part-time as the Technical Support Administrator/Project Coordinator to support the MSU team. His main responsibility was to oversee the setup and installation of the donated desk-top and lap-top computers from the Commonwealth's Office of Technology, while working with the site coordinators to trouble shoot any network issues. This technician not only served as a consultant to answer questions and address any technical concerns, he set up and taught basic computer classes to the residents at the request of the site coordinators. Over the course of three months he conducted an average of three classes per week. Having someone with expert knowledge about computers to get them set up and loaded with the educational programs, as well as work one-on-one with the site coordinators and users, is another main component to the grant success.

Objective 2: Enabling Broadband Availability

Once the local and regional leadership had been developed, the next step was to survey existing technology and broadband availability in the four counties. Using national data and current information collected by the state OBOD through the Baker Group consultant, as well as additional information provided by the Purchase Area Development District, the following information was collected on each county.

Ballard County:

Based on the December 31, 2013 data reported on the OBOD Broadband Map, broadband availability for Ballard County is as follows:

- **98.9% = Total Broadband Availability**
- 98.9% = Wireless Availability
- 60.2% = Wireline Availability

All availability information is based on download speeds of 3 Mbps or higher and upload speeds of 768 Kbps or higher. Ballard County is ranked 37th out of 120 counties. The providers listed on the national broadband map with at least 3 Mbps broadband service in Ballard County include:

- AT&T Inc.
- Ballard Rural Telephone Cooperative Corporation
- Verizon Communications
- Zito Media, LP

Carlisle County:

Based on the December 31, 2013 data reported on the OBOD Broadband Map, broadband availability for Carlisle County is as follows:

- **99.3% = Total Broadband Availability**
- 98.9% = Wireless Availability
- 71.0% = Wireline Availability

All availability information is based on download speeds of 3 Mbps or higher and upload speeds of 768 Kbps or higher. Carlisle County is ranked 28th out of 120 counties. The providers listed on the national broadband map with at least 3 Mbps broadband service in Carlisle County include:

- AT&T Inc.
- Ken-Tenn Wireless, L.L.C.
- Verizon Communications
- Windstream Communications, Inc.
- Zito Media, LP

Fulton County:

Based on the December 31, 2013 data reported on the OBOD Broadband Map, broadband availability for Fulton County is as follows:

- **97.6% = Total Broadband Availability**
- 96.8% = Wireless Availability
- 74.0% = Wireline Availability

All availability information is based on download speeds of 3 Mbps or higher and upload speeds of 768 Kbps or higher. Fulton County is ranked 54th out of 120 counties. The providers listed on the national broadband map with at least 3 Mbps broadband service in Fulton County include:

- AT&T Inc.
- Ken-Tenn Wireless, L.L.C.
- Verizon Communications
- Zito Media, LP

Hickman County:

Based on the December 31, 2013 data reported on the OBOD Broadband Map, broadband availability for Hickman County is as follows:

- **98.6% = Total Broadband Availability**
- 96.5% = Wireless Availability
- 47.6% = Wireline Availability

All availability information is based on download speeds of 3 Mbps or higher and upload speeds of 768 Kbps or higher. Hickman County is ranked 40th out of 120 counties. The providers listed on the national broadband map with at least 3 Mbps broadband service in Hickman County include:

- AT&T Inc.
- Ken-Tenn Wireless, L.L.C.
- Verizon Communications
- Windstream Communications, Inc.
- Zito Media, LP

During the course of the grant, two formal meetings and several individual meetings were held with providers in the region to try and expand the outreach of broadband to the area and look for potential funding sources. Most of those meetings were held in March by representative of the university and the Baker Group. Although no specific plans are underway at this time, the meetings helped to inform and educate the providers about the need for expansion and encourage their involvement.

Objective 3: Improve Internet Access

Once the local leadership was on board and the broadband availability assessed, the next step was to identify the eLearning needs and existing resources available and secure the equipment and needed resources to make the centers a reality. Several weeks and numerous visits to the counties by the MSU staff finally resulted in the opening of five locations in four counties.

One of the most important components to the success of the grant was the ability to obtain a donation of refurbished desk top and lap top computers from the Commonwealth Office of Technology. Working with the OBOD staff, MSU received 100 desk top and 40 lap top computers to be divided between the four counties based on their needs to set up the eLearning centers.

The eLearning center sites were selected by the Regional Task Force working directly with the community leadership and relying on their recommendations. Each site recommendation was visited by MSU staff to determine if it had all the necessary requirements. On the initial site visit, an MSU representative met with someone in charge of the facility and assessed the needs for each facility using the following list of questions:

1. Security - How can the computers be secured? Are there doors that can be locked?
2. Space - Is there space for desktops? How many tables and chairs?
3. Teaching - Can it be used as a classroom?
4. Power - Will you be able to power all of the computers at the same time?
5. Network - Is there wireless or wired Internet? What type of work would be needed if wired?
6. Internet - Who is the current broadband provider? Are there alternatives?
7. Computers - Do they currently have any public computers? What type and how old?
8. Peripherals - Do they have printers or any other peripherals?
9. Personnel - Is there someone there to keep the doors open or to answer questions?

Once a site was located, then MSU staff worked directly with the Regional Task Force to identify a site coordinator at the facility to oversee the project and make sure everything was put in place. Some sites required very little upgrades, while others took several weeks to complete. For all the sites, a large vinyl sign was ordered and hung in the center with the names and logos of the partners on the grant.

Fulton County

On Tuesday, June 17, 2014 the first official sites were opened in Fulton County and a ribbon cutting ceremony conducted to advertise the centers to the public. Thirty-three representatives from OBOD, CPE, MSU as well as local and county officials were in attendance. A total of 25 computers were placed in two different cities, 15 at the Public Library in Fulton City and 10 at the municipal building in Hickman, KY. The Public Library in Fulton City already had seven computers available to the local citizens. Because of the demand, the computers had 30 minute timers on them to limit how long someone could use it. A highlight of the day occurred when the first site was opened at the Public Library. Community members were waiting in line to use the computers when we opened the new center. Within 15 minutes of the opening, one of the residents had completed a job application online. Over the course of several months, the average daily attendance for the library has been 15 visits per day and they have logged over 2,000 hours of usage. In addition, they saw 100 walk-ins the first month. From the log sheets that were placed in each of the locations, the main use of the computers has been for internet research, social networking, job searching/application, as well as learning and practicing basic computer skills. In addition to general public walk-ins, the library location has seen continued use by local adult education students and has offered multiple classes on basic computer usage. The classes have been attended by regulars who wanted to learn more and each class doubled in size as the information was advertised. The Hickman site has seen less traffic but more specific request such as farmers wanting to use the computer for research/reporting of crops to the state and employers who request to use it every Monday for employee training. There was also a request to offer a class on how to file your taxes online which will happen after the first of the year. Post cards giving details on the locations and times of the centers were mailed to 3800 residents in homes throughout the county.

Hickman County

On Friday, August 1, 2014 the third official site was opened in the second county of Hickman at the Senior Citizens Center located just off the court square in Clinton, KY. Once again, a ribbon cutting ceremony was conducted and over thirty-five, leaders from MSU, CPE, OBOD, the city and county were on hand to celebrate this opening. Twenty-four computers were placed in a room just off of the main dining and recreation facility of the center. Immediately following the ceremony, lunch was served to the senior citizens and attendees and many of the senior citizens began using the computers right away. The average daily usage for this facility since it opened is twenty. In addition to the senior citizens who utilize the facility daily for a variety of reasons, the facility has seen traffic from the local high school students in the evenings and weekends for school assignments as well as applying for scholarships and college admissions as documented on the login sheets. For four months, the county high school brought a bus to the facility with 25 students to use the center to teach a computer tech apps class. The school's computer lab was not large enough to accommodate an addition class so the Principal coordinated with the Senior Citizens Director to work out a schedule for the usage of the eLearning center. Also, the local Adult Education Center is looking to partner with the Senior Citizens Center to be able to offer classes there. Post cards giving details on the location and times of the centers were mailed to 3200 residents in the county.

Ballard County

On Thursday, September 4, 2014 the fourth official site was opened in the third county of Ballard at the Barlow City Hall Annex. This facility, which used to house the local fire department, was revamped to house the eLearning center. Fourteen computers were placed there and twenty-five attended the ribbon cutting ceremony with many of those being senior citizens from the community. The local school brought a group of their culinary students over to provide refreshments and many of the students expressed interest in using it after school for projects. On opening day the Audubon Area Community Services, Inc. set up a schedule to use the center to provide work ready job training to its clients for a month. Many of the participants who attended that training are still utilizing the center. The facility has also been used by several different groups in the community including: the fire department for specialized mandatory computer training of 10 volunteer fire fighters to keep their certification; the senior citizens center for community classes on various topics such as social media; a Boy Scout troop with 12 members to work on merit badge certification; the city council made up of 6 members for local meetings; Wisdom Tree Technology, a local broadband company, requested use to conduct benefit training for 14 of their employees; and most recently it was used to facilitate a skype meeting for the 6 local officials to meet with Division of Water Quality in Frankfort to save travel money for a grant project. One of the most unique usages reported was a homeless man who found out about the center and started coming every day to study the online drivers test so he could obtain a drivers license and get a job.

Carlisle County

During the month of November, the MSU staff worked with the Regional Task Force to create two more additional sites in the fourth county of Carlisle. The UK Co-op Extension office located on State Route 123 in Bardwell, KY already had four computers available to the community for general usage and tracked on the average 4 to 5 visitors a week. What they really needed were laptops to finish out the facility and to use for large classes and educational purposes. Since the county was in the process of building a new facility in which the extension office will be relocated when completed, it was decided to offer up 20 lap top computers to the Extension office and to provide a media cart for storage until all the computers could be moved to the new location after the first of the year. One of the most requested courses to be taught was on image management to a group of ladies who are learning to combine computers with handy crafts to enhance their quilting skills. This facility will probably see the most educational programing of all the counties based on the success already established through the UK Co-op Extension Service in the county. In addition to the Co-op office, four computers were placed in an old church building that is being renovated to house a library/museum. These computers are being used to facilitate the library research and general community interest. On the average, they are seeing 4 to 5 individual each week.

Sustainability

Now that the centers are up and running, the MSU team will continue to work with the Regional Task Force and site coordinators to provide assistance in maintaining the centers and provide educational programing upon request. Some of the courses requested include: Introduction to Computers and the Internet, Internet Safety and Security, Word Processing, Spreadsheets and Their Uses, Social Networking, How to Apply For A Job Online, Tax Preparation, Precision Agriculture, Small Business Development, Adult Education and Early Childhood Training. Additional courses can and will be developed upon the request of the Regional Task Force or individual community members. The grant funds have been dispersed to each county fiscal court to cover the administrative costs for up to six months. During that time, local and county officials will be working on gaining community support to sustain the centers after the grant funds run out. In all four counties, facility costs are already being covered by the county. A PowerPoint presentation and a video were developed by the MSU staff to be used in speaking to civic clubs and educational groups about the usage and support. To date a presentation has been presented in each of the four counties and to the CPE Board of Directors. Plans are in place for this to continue. The Purchase Area Development District which has access to grant funds through the Workforce Investment Board and other federal resources such as the Regional Delta Authority will be working with the County Judges to seek other funding opportunities. One unexpected outcome from the grant was the ability of each county to utilize the eLearning Centers in making application for the Kentucky Work Ready Communities certification promoted by the Kentucky Workforce Investment Board. Two of the four counties have started the application process and one has been certified Work Ready in Progress. This certification is being sought by the counties

for improving economic development opportunities with employers looking to relocate or develop in the region.

Lastly, as a result of the success and publicity of the eLearning centers, MSU was contacted by the Early Head Start program about obtaining any remaining desk top and lap top computers that were not needed by the centers to support their programming in those same counties. Murray Head Start is the provider of services to at-risk families and children ages birth to five in an eight-county service area of western Kentucky, including the counties of Ballard, Carlisle, Hickman, Fulton, Graves, Marshall, McCracken, and Calloway. Murray Independent School District is the federal grantee for Office of Head Start funding to serve Head Start/Preschool children, Early Head Start infants, toddlers and pregnant mothers in each of these counties. They partner with eleven local school districts, two universities, and three housing authorities for facilities and blended services. Federal dollars are stretched thin to cover this broad service area with 107 classrooms in 29 different locations. In total, they provide educational and family services for 623 federally funded children along with approximately 1,200 state-funded preschool children in blended classrooms. Head Start needs this technology to ensure that children and staff have access to adequate technology resources to enhance curriculum support, to manage data reporting, and to support parent education and employment needs. They will use the desk top computers in classrooms for children's use of educational software on a daily basis. The portable lap tops will be used by staff with child screenings and assessments, tracking of child outcomes, enrollment applications, home visit resources, and recruitment efforts. They will also use the computers to support family goals for adult education and self-sufficiency, such as parent stations for completing online job applications, study exercises for GED, and for video and web-based parent training sessions. Therefore, on Tuesday, December 23, 2014 the MSU support team delivered 23 desk top and 21 lap top computers to the Murray Head Start offices for their use in the region. A press release went out to all the counties.

Conclusion

From start to finish this grant has been a collaborative effort on the part of many across the state. The leadership, support and guidance from OBOD along with CPE and the Purchase Area Development District have allowed the university to effectively administer the grant and accomplish all the priorities identified by the Regional Work Group and stakeholders.

As a result the follow three objectives were met:

1. Development of the leadership and institutional capacity needed to initiate and sustain broadband efforts at the local or regional level.
2. Enabling availability of broadband in rural residential areas.
3. Improved public access to broadband where citizens can access broadband for free on public devices in Internet Access Centers (IAC) or on their own device at hot spot locations.

The main success factors were:

1. Collaboration with local leaders to obtain support early in the grant process.
2. Flexibility in working with the community partners to meet their needs and make changes along the way as issues would arise.
3. Trained and knowledgeable staff working together with state and local leadership to insure the goals was met.
4. Excellent stewardship of the funds through discounts and community resources.

The main challenges were:

1. Limited broadband providers in the region.
2. Geographic challenges of meeting with stakeholders and finding central locations in the four very rural communities.
3. Limited financial resources to pull from in the region.
4. Reporting of the usage and tracking the results.

It has been both challenging and rewarding to see how this grant has impacted the lives of those living in the four rural river counties of Ballard, Carlisle, Hickman and Fulton in Kentucky. Over a year of planning and coordinating resulted in increased usage of broadband in ways we never dreamed would be possible. From students being bused from the local high school to a senior citizens center to use the free internet access - to firefighters and boy scouts working together in the same center to earn their merit, this grant has brought a diverse group of people together and created a community that is now looking for more ways to increase their knowledge and usage of broadband technologies. It has saved individuals time and money in driving to other communities 30 or more minutes away to use the technology as well as encouraged individuals who have never used the technology to try something new. It has heightened awareness of the local county leaders that more infrastructure is needed to help speed up business delivery and improve economic development. Last, but most important to MSU, is that this grant is helping to raise the educational attainment level of the four communities by providing the technology needed to engage in online learning and providing a safe, quiet, helpful place for everyone to learn.